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TAXONOMIC STUDIES ON THE MARINE OSTRACODA FROM THE EAST COAST OF INDIA[1]

C. Annapurna and D. V. Rama Sarma[2]

(With four plates)

Introduction

While investigating the systematics and ecology of benthic ostracods, 40 species belonging to 27 genera and 14 families were identified from the marginal marine/estuarine environments, namely Bimili backwaters (17°54′N; 83°28′E), Balacheruvu tidal stream (17°39′N; 83°15′E), and Vasishta Godavari estuary (16°18′N; 81°42′E).

Among the members of the family Cytheridae Baird 1850, *Cythere dentaculatum, Neomonoceratina indica, N. spinosa* and *Eopaijenborchella subcaudatum* are new to science; *Cythere darwinii* and *Hemicytheridea truncatula* were recorded for the first time from Indian waters. *Palmenella mckenzii* Annapurna and Rama Sarma 1985 was described earlier from the Bimili backwater, on the east coast of India (Annapurna & Rama Sarma 1985).

Cythere darwinii Brady, 1868
(Pl. 1, Fig. A)

Lateral outline elongate-ovate. Anterior end evenly rounded,posterior end narrowly rounded below and compressed above. Dorsal margin straight. Ventral margin turns upwards towards the posterior end. Surface of the carapace ornamented with a larger pit with numerous small punctae in between the smaller arranged in rows behind the anterior and posterior margins. Hinge amphidont type. In the left valve the median hinge bar crenulate, smooth in the right valve. Normal pores numerous, central muscle scars in the form of vertical row of 4 adductor scars with one frontal scar. Eye spot absent. Left valve larger than right. Right valve dorsally higher than the left.

Length 0.88 mm; height 0.49 mm.

Occurrence: Backwaters of Bimili and Balacheruvu tidal stream.

Distribution: Northwestern Europe, North America, Japan.

Cythere dentaculatum sp. nov.
(Pl. 1, Fig. B; Pl. 2, Fig. 1)

Carapace laterally compressed. Ventral margin sinuate, dorsal margin straight, maximum height approximately at the anterior end. Surface sculptured with strong ridges and fossae arranged parallel to the ridges. Anterior end rounded, bears marginal denticulations. Posterior end truncate, bears two marginal denti-

[1] Accepted August 1985.

[2] Department of Zoology, Andhra University, Waltair 530 003.

culations. Hinge merodont/entomodont type. Inner lamella widest anteriorly. Marginal pore canals not clear. Central muscle scars in the form of 4 adductor scars and one fulcral V-shaped scar. Normal pores numerous and fairly wide. Length 0.60 mm; height 0.27 mm.

Remarks: The present form differs from known species of the genus *Cythere* Müller in surface sculptured with strong ridges and fossae arranged parallel to the ridges. Anterior end rounded and consists of marginal denticulations, posterior end truncate and consists of marginal denticulations.

Type-locality: Bimili backwater, east coast of India.

Type-specimens: Holotype and 2 paratypes are deposited in the Museum of Zoological Survey of India, Calcutta, India.

Occurrence: Backwaters of Bimili (India).

Genus: *Hemicytheridea* Kingma, 1948

Hemicytheridea truncatula (Brady, 1868)
(Pl. 1, Fig. C; Pl. 3, Figs. 1-7)

In lateral view the valves are elongate, subreniform in outline, strongly resembling those of *Cytheromorpha* and *Leptocythere*. Dorsal margin straight, ventral margin sinuous. Highest in the anterior cardinal angle, posterior end turned upwards. Anterior end broadly rounded, posterior end truncate. Surface sculptured with rounded fossae. Marginal denticulations absent. Valves moderately heavily calcified. Hinge amphidont type. In the left valve a smaller anterior socket present. Subtriangular in lateral view. In front of this socket is a slightly projecting tooth which is widest dorsally and subacute below. Behind the socket lies a long crenulate bar. The posterior tooth of right valve serrate. The median hinge-element of the right valve are complementary to those in the left valve. The inner-lamella moderately wide anteriorly, comparatively narrow vestibulum present. Marginal pore canals moderately few, simple and straight. Central muscle scars vertical row of 4 adductor scars with one frontal scar.

Length 0.57 mm; height 0.30 mm.

Antennule 5-segmented, penultimate podomere with 2 claw-like setae. Ultimate podomere short, ends with 2 claw-like setae. Antenna 5-jointed, spinneret seta well developed, ultimate podomere with 2 claw-like setae and 2 slender setae. Mandible with 5 serrate teeth placed laterally on cutting edge. Mandibular palp 4-segmented, the first segment bulbous, second segment with one slender seta, ultimate segment with 2 long feathered ventral bristles and 5 slender and elongated setae. Maxilla with 3 short, broad masticatory lobes each with short setae, vibratory plate bears unfeathered rays. Thoracic legs 4 segmented, each ends with slender setae. Distal ends of each segment with short setae.

Occurrence: Backwaters of Bimili and Vasishta Godavari estuary (India).

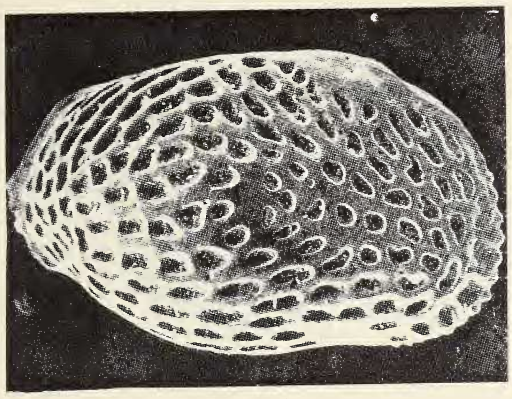
Distribution: Indo-Pacific region.

Genus: *Neomonoceratina* Kingma, 1948

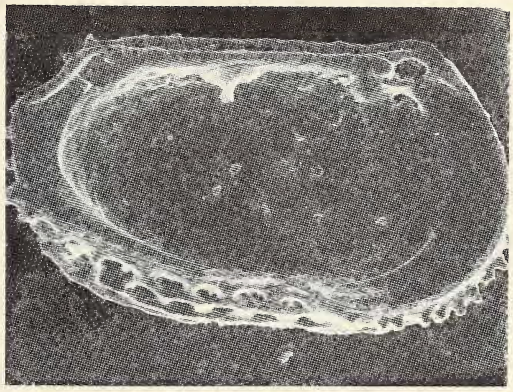
Neomonoceratina indica sp. nov.

(Pl. 1, Fig. D; Pl. 2, Figs. 2, 3; Pl. 4, Figs. 1-10)

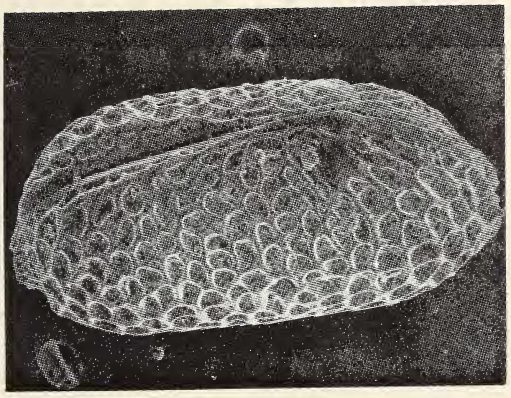
Carapace subrhomboidal in lateral view, the height generally equals more than half the length. Dorsal margin straight, ventral outline sinuous. Anterior end obliquely truncated above, rounded below. Posterior end with clear caudal process situated above the middle. Valves rather deep, pronounced vertical subcentral sulcus dividing them into 2 inflated parts. Anterior and posterior peripheral areas compressed laterally. Each valve with two closely set ventral longitudinal ridges; intercostal areas reticulate. Hinge amphidont type, anterior and posterior ends smooth, median hinge element crenulated in the left valve. Inner lamella wider at anterior end than poste-



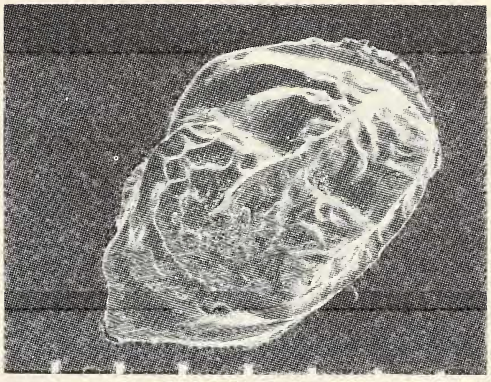
A



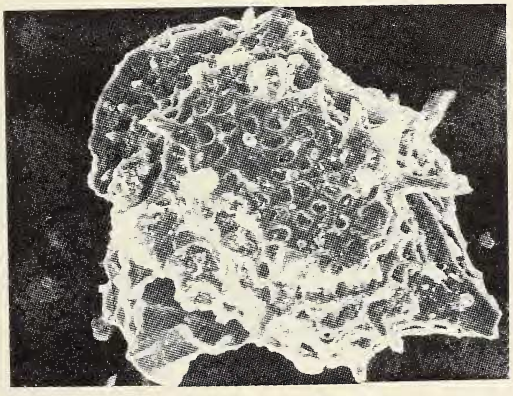
B



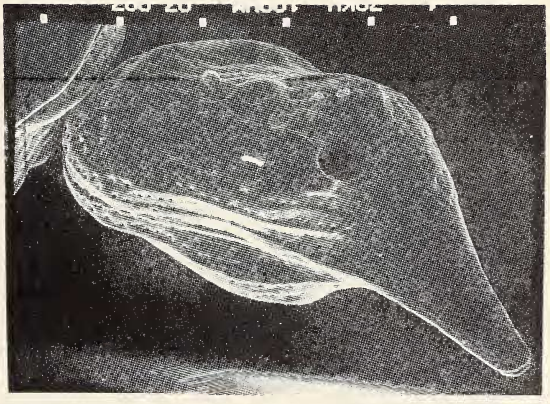
C



D

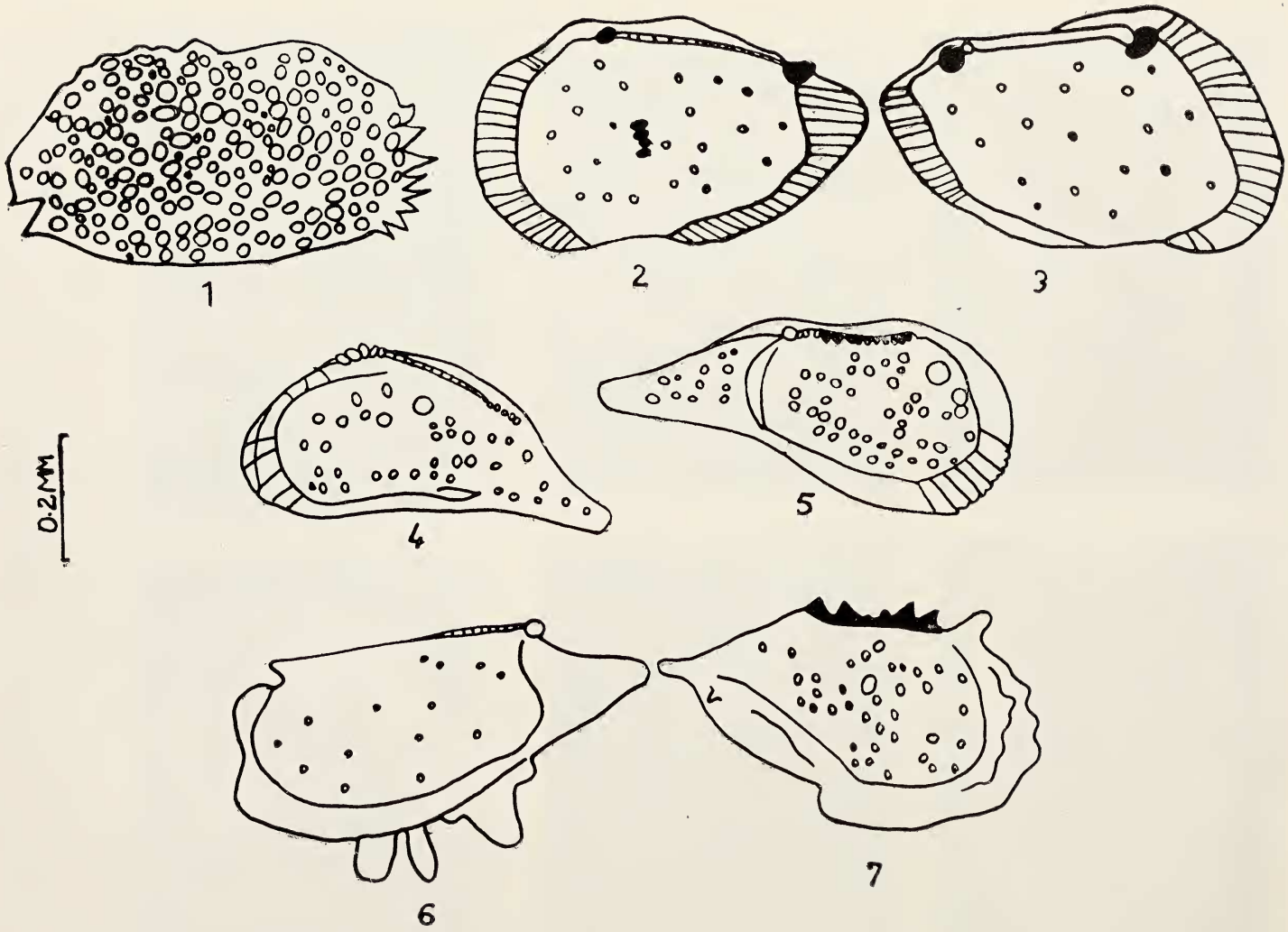


E



F

A. *Cythere darwinii* — Exterior view of right valve. B. *Cythere dentaculatum* — Interior view of left valve. C. *Hemicytheridea truncatula* — Exterior view of complete shell. D. *Neomonoceratina indica* — Exterior view of left valve. E. *Neomonoceratina spinosa* — Exterior view of left valve. F. *Eopaijenborchella subcaudatum* — Exterior view of complete shell.



1. *Cythere dentaculatum* — Exterior view. 2. *Neomonoceratina indica* — Interior view of left valve. 3. *Neomonoceratina indica* — Interior view of right valve. 4. *Neomonoceratina spinosa* — nterior view of left valve. 5. *Neomonoceratina spinosa* — Interior view of right valve. 6. *Eopaijenborchella subcaudatum* — Interior view of right valve. 7. *Eopaijenborchella subcaudatum* — Interior view of left valve.